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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,305	02/06/2004	John H. Moorhouse	2237.08US03	5435
24113	7590	01/30/2006	EXAMINER	
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A. 4800 IDS CENTER 80 SOUTH 8TH STREET MINNEAPOLIS, MN 55402-2100			TRAIL, ALLYSON NEEL	
			ART UNIT	PAPER NUMBER
			2876	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/774,305	Applicant(s) MOORHOUSE ET AL.	
	Examiner Allyson N. Trail	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continuing Data

1. This application is a CIP of 10/268,065, patent 6,764,007, filed October 9, 2002, which is a continuation of 10.057,598, patent 6,449,660, filed January 24, 2002.

Terminal Disclaimer

2. The terminal disclaimer filed on November 9, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of patent number 6,764,007 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 9, 10, 15-17, 35, 37-39, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in view of Kurozu et al (5,117,664).

Gokcebay et al teaches the following in regards to claims 1, 3, 4, 15-17, 35, 37, and 38:

“A mechanical lock and key includes an electronic access control feature for preventing opening of the lock unless prescribed conditions are met.” (Abstract).

"The mechanical key has a key head with a battery, microprocessor and database. When the key is inserted into the lock, a one-wire bus connection sends the lock ID to the key's microprocessor, a comparison is made by the microprocessor to determine whether the lock is authorized to be opened, and if so; a code for the addressable switch, determined from the key database, is sent via the one wire bus to the switch, powering the solenoid, withdrawing the blocking pin and enabling opening of the lock. (Abstract).

Figure 7 shows a mechanical key 52. The key 52 has an enlarged key head 58, sufficient to contain internal electronic components and to also have an external input device (keypad 60) and, preferably, a small display 62.

As explained in column 1, lines 44-58; a lock includes a plurality of tumbler discs and at least one of the discs are rotated by a key. It is sensed when one of the discs are rotated. Clearly the sensing occurs by detecting a surface change of the rotatable discs. A controller, which controls the lock, recognizes the detected rotation of the disc and the lock is then unlocked. The discs consist of highs and lows along the surfaces.

Gokcebay et al teaches the following in regards to claims 9 and 10:

"Another feature of the invention is a small keypad on the head of the key. This can be used for additional security, to require an operator to input an authenticating code known only to the proper operator. Thus, the key cannot be used by an unauthorized person. The programming of the microprocessor preferably is set so that the operator enters his PIN number at the start of a route wherein a series of locks will be opened." (Col. 4, lines 42-49).

Gokcebay et al teaches the following in regards to claim 43:

Figure 7 illustrates a small display 62.

Although Gokcebay et al teaches detecting the rotation of the rotating discs, Gokcebay et al may not specifically state that the surface changes are detected during rotation of at least one of the discs. Furthermore Gokcebay et al fails to teach the processor comparing data from the sensors with programmed key data to generate a lock command signal.

With respect to claims 1 and 35 Kurozu et al teaches using sensors, such as switches, which are arranged to detect the insertion of a key into a lock, and additionally used to sense the rotation of the key and therefore the discs. (Abstract).

Kurozu et al further teaches a controller, which communicates with the multiple sensors and processes data from the sensors. (Col. 2, lines 23-40).

More specifically, Kurozu et al discloses 3 sensors used, which sense the rotation of the key. (Col. 2, lines 23-33).

With respect to claim 3, as is taught above, various sensors are used to detect the multiple rotational positions of the key. As the key rotates, the surface of the key changes and different highs and lows are detected.

With respect to claims 5 and 39, Kurozu et al teaches comparing data from the sensors with programmed key data to generate a lock command signal. Column 1, lines 49-55 discloses that the locking command signal is not initiated until a predetermined number of conditions have been met, including various sensor data.

In view of Kurozu et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of sensors to detect the surface changes during the rotation of the discs along with the locking mechanism taught by Gokcebay et al. Gokcebay et al already teaches detecting the rotation of the discs. One would be motivated to specifically sense the surface changes in order to clearly verify that the key is being rotated and the lock is being tampered with.

Additionally, one would be motivated to compare data from the sensors with programmed key data to generate a lock command signal in order to verify that the lock should in fact be locked and therefore the lock cannot be accidentally locked.

5. Claims 2, 6, 11, 12, 18, 21-23, 25-31, 33, 34, 36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and in further view of Chaum (6,318,137).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al are discussed above (including detecting surface changes during rotation of at least one of the discs as disclosed in claims 18 and 28, the input device being housed with a remote processing system separate from the lock as disclosed in claims 25 and 26, entering a PIN as disclosed in claim 31 and having the processing system housing remote from the lock and a display as disclosed in claims 33 and 34). Gokcebay et al however fails to teach the sensors being capable of sensing the reflective surface changes or being an infrared sensor and additionally fails to teach comparing data from the sensors, which are used to generate a lock command signal.

Chaum teaches the following in regards to claims 2, 12, 18, 21, 22, 27-30, 36, and 40:

“Various sensor technologies can be used for each approach, such as by use of a digital camera, array of light/infra-red sources and/or sensors, the reflection patterns of other energy directed at the key, other metal detection sensor techniques, or any other sensor technology that may already be or become known in the art.” (Col. 9, lines 45-51).

Chaum teaches the following in regards to claims 6, 11, and 23:

Claim 1, which includes an electronic lock system comprising, “a sensor configured to sense at least a portion of the biting profile shapes of flat rigid cylinder-lock type keys inserted into said keyway channel of the electronic locking system; a comparator coupled to the memory and the sensor, the comparator configured to compare a sensed biting profile shape with the stored shape related information stored in said memory; and an actuator configured to unlock the electronic locking system at least partially in response to the comparator determining that the sensed biting profile shape corresponds to at least the portion of the stored shape related information.”

In view of Chaum’s teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use additional sensors such as reflection or infrared sensors and comparing the sensor’s data as taught by Chaum along with the locking mechanism taught by Gokcebay et al. Gokcebay et al already teaches providing further security by incorporating a keypad for entry of an access

code. One would be motivated to add extra sensors and use a comparator in order to provide additional security to the locking device.

6. Claims 8 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and in further view of Altschul et al (6,144,847).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al are discussed above. The combination however fails to teach the input being used to input a purchase amount in a commercial transaction environment.

Altschul et al teaches the following in regards to claims 8 and 42:

"Accordingly, once a purchase is made and the purchase amount is entered into the credit card account, as set forth above, the user may communicate telephonically with computer 110, as before, entering an input code to access the computer 110, entering the user's credit card account number and any further identifying code necessary, such as a personal identification number (PIN), the purchase amount and the transaction confirmation number, all with a keypad 230 serving as an input means." (Col. 6, lines 2-11).

In view of Altschul et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the input keypad as taught by Gokcebay et al for inputting purchasing prices as taught by Altschul et al. Gokcebay et al teaches using a keypad for additional security, so that an operator must enter a code in order to use the key. One would be motivated to combine the teachings of Gokcebay et al and Altschul et al in order to use Gokcebay et al's secure key for additional

applications such as purchasing. This would extend the use of the Gokcebay et al's key and therefore be more marketable.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and in further view of Denison et al (6,359,547).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al are discussed above. The combination however fails to teach the input device being housed on a portion of the lock.

Denison et al teaches the following in regards to claim 14:

Figure 1 shows the input device being housed on a portion of the lock.

In view of Denison et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to instead of placing the input device on the key as taught by Gokcebay et al, place the keypad in the same housing of the lock itself. Although the function of the keypad will not change, one would be motivated place the keypad on the lock itself in order to provide for a less cumbersome key as well as reducing the risk of damaging the keypad due to carrying around a key as all times.

8. Claims 7, 13, 19, 20, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and Chaum (6,318,137) and in further view of Altschul et al (6,144,847).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al and Chaum are discussed above. The combination however fails to teach the transaction

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being selected from a group consisting of a credit card transaction and a consumer purchase transaction.

Altschul et al teachings are also discussed above (in regards to claims 7, 13, 19, 20, and 41), which include the transaction including a credit card transaction.

In view of Altschul et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the input keypad as taught by Gokcebay et al for credit card transactions as taught by Altschul et al. Gokcebay et al teaches using a keypad for additional security, so that an operator must enter a code in order to use the key. One would be motivated to combine the teachings of Gokcebay et al and Altschul et al in order to use Gokcebay et al's secure key for additional applications such as purchasing. This would extend the use of the Gokcebay et al's key and therefore be more marketable.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and Chaum (6,318,137) and in further view of Denison et al (6,359,547).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al and Chaum are discussed above. The combination however fails to teach the input device being housed on a portion of the lock.

Denison et al teaches the following in regards to claim 24:

Figure 1 shows the input device being housed on a portion of the lock.

In view of Denison et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to instead of placing the input

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device on the key as taught by Gokcebay et al, place the keypad in the same housing of the lock itself. Although the function of the keypad will not change, one would be motivated place the keypad on the lock itself in order to provide for a less cumbersome key as well as reducing the risk of damaging the keypad due to carrying around a key as all times.

10. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al (6,552,650) in combination with Kurozu et al (5,117,664) and Chaum (6,318,137) and in further view of Denison et al (6,359,547).

Gokcebay et al's teachings in combination with the teachings of Kurozu et al and Chaum are discussed above. The combination however fails to teach the input device being housed on a portion of the lock.

Denison et al teaches the following in regards to claim 32:

Figure 1 shows the input device being housed on a portion of the lock.

In view of Denison et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to instead of placing the input device on the key as taught by Gokcebay et al, place the keypad in the same housing of the lock itself. Although the function of the keypad will not change, one would be motivated place the keypad on the lock itself in order to provide for a less cumbersome key as well as reducing the risk of damaging the keypad due to carrying around a key as all times.

Response to Arguments

11. Applicant's arguments with respect to claims 1-43 have been considered but are moot in view of the new ground(s) of rejection. Although it is believed that Gokcebay et al somewhat inherently teaches sensing surface changes of the discs, an additional prior art reference (Kurozu et al) which clearly teaches multiple sensors for detecting a change in the rotational position of the discs is being provided.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Tashiro et al (4,812,838) and Stricklin, Jr. (5,121,102).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [allyson.trail@uspto.gov].

All Internet e-mail communications will be made of record in the application file.
PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record

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includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Allyson N. Trail
Patent Examiner
Art Unit 2876
January 19, 2006



KARL D. FRECH
PRIMARY EXAMINER